

REMARKS

Reconsideration of the instant application is respectfully requested. The present submission is responsive to the Office Action of September 9, 2004, in which claims 1-24 are presently pending. Of those, each of the pending claims 1-24 have been rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent 6,656,019 to Chen, et al. (Chen '019), as well as by International Published Application WO 03/017348 by Park, et al. Furthermore, claims 1-24 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,685,548 to Chen, et al. (Chen '548), as well as by U.S. Patent 6,692,338 to Kirchner.

In addition, claims 1-4, 7-12, 15-20, 23 and 24 have been rejected under 35 U.S.C. §102(b) as being anticipated by Japanese Patent JP 2002028849 to Ito, et al., by U.S. Patent 5,876,271 to Oliver, and by U.S. Patent 5,725,420 to Torii. Finally, claims 1-4, 7-12, 15-20, 23 and 24 have been rejected under 35 U.S.C. §102(a) as being anticipated by Japanese Patent JP 20033347539 to Anzai, et al. For the following reasons, however, it is respectfully submitted that the application is in condition for allowance.

Claim 1 has been amended as indicated above to incorporate the elements of now canceled claims 2-6, as well as to recite that the second side of the CMP pad is a polishing side (e.g., as recited in originally filed claim 17, and shown in Figure 3). Correspondingly, claim 9 has been amended as indicated above to incorporate the elements of now canceled claims 10-15, as well as to recite that the second side of the CMP pad is a polishing side. Claim 17 is further amended to incorporate the elements of now canceled claims 18-22. Claims 7, 8, 15, 16, 23 and 24 are also canceled.

As to the various §102 rejections applied to the pending claims, the Applicants respectfully traverses each of the pending rejections as is set forth more particularly below.

§102 rejections

In order for a reference to anticipate a claim under §102, the reference must teach and every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). See MPEP §§ 2131.

With particular regard to the §102(a) rejections set forth in paragraph 2 of the present office action, the Applicant points out the following:

Chen '019 - This reference fails to teach or disclose the claimed elements of the holes and grooves arranged into a concentric circular configuration. As shown in Figures 4-6 of Chen, the grooves are configured into a spiral pattern, not a concentric circular configuration. (See Col. 7, line 64 - Col. 8, line 24) Thus, Chen '019 fails to teach or suggest each and every element of the presently amended claims.

Park WO '348 - This reference fails to teach or disclose that the holes/grooves are formed on first and second sides of the polishing pad (respectively). In other words, the hole/groove combination embodiments taught by Park are disposed on the same (polishing) side of the CMP pad (see Park, Figs. 9, 10; claim 1).

With regard to the §102(e) rejections set forth in paragraph 3 of the present office action, the Applicant points out the following:

Chen '548 - The Chen '548 patent issued as a divisional application from Chen '019, disclosing identical information in the specifications thereof, and is thus cumulative with respect to Chen '019. In any case, Chen '548 fails to teach or disclose the claimed elements of the holes and grooves arranged into a concentric circular configuration.

Again, as shown in Figures 4-6 of Chen, the grooves are configured into a spiral pattern, not a concentric circular configuration. Thus, Chen '054 fails to teach or suggest each and every element of the presently amended claims.

Kirchner '338 - This reference fails to teach or disclose that the grooves are formed in the second, polishing side of the CMP pad. As particularly shown in Figure 3A, the grooves run along the interface 310 of the pad 300 and the pad backing 304. While the slurry drain grooves may be in the upper surface of the pad backing 304 and/or the bottom surface of the pad 300 (Col. 5, lines 8-14), this location is still not the polishing surface (i.e., the top of the pad 300).

With regard to the §102(b) rejections set forth in paragraph 3 and the §102(a) set forth in paragraph 4 of the present office action, the Applicant has overcome the same by the present amendment, which incorporates the elements of claims 5-6, 13-14 and 21-22, respectively into independent claims 1, 9 and 17. Moreover, with regard to the specific references cited by the Examiner in paragraphs 3 and 4, the Applicant further points out the following:

Ito JP '849 - In addition to the lack of a concentric circular pattern, the polishing pad of Ito "comprises a plurality of peelable thin layers" and, more particularly "...comprises the lamination of peelable layers 11 to 17." In contrast, the pending claims recite a CMP pad "having a unitary body." As such, Ito additionally does not teach this claimed feature.

Torii '420 - This reference teaches the formation of the holes/grooves on the same side of the CMP pad (i.e., the hard layer 711). However, as clearly illustrated in Figure 2 (and the parallel embodiments of Figures 8, 10, 12, 16, 18 and 20), the pad is comprised of the entirety of hard layer 711, film 411 and soft layer 611. Accordingly, since the grooves of Torii are formed on the polishing side of the pad, then so are the holes.

Anzai JP '182 - As is claimed, "...each of said holes are sized in a manner so as not to exceed the width of a corresponding groove aligned therewith..." However, in addition to the lack of a concentric circular pattern, the holes 2 of the Anzai pad clearly exceed the width of the grooves, as particularly shown in Figure 4.

For the above stated reasons, it is respectfully submitted that the present application is now in condition for allowance. No new matter has been entered and no additional fees are believed to be required. However, if any fees are due with respect to this Amendment, please charge them to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

Respectfully submitted,
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